REMARKS

Applicant has canceled original claims 1, 10 and 11, added new independent claim 12 to an apparatus and claim 13 to a method and new claim 14 dependent on claim 13, and amended claims 2, 3, 5-7 and 9 so that each are dependent only on new claim 12, amended claims 2-9 to remove reference numerals therefrom and amended original claim 5 so that is consistent with new claim 12.

Applicant teaches the art in new independent claim 12 a redundant serial bus that has n>1 parallel bus lines for redundant networking of bus subscribers each having a single bus communications interface. The redundant serial bus comprises:

a redundancy means, which can be connected upstream, having n interfaces for connection to said n parallel bus lines and one interface for connection to the single bus communications interface of at least one bus subscriber,

said redundancy means which can be connected upstream having a receiving end comprising an input stage at least for each of said bus lines, an evaluation stage and an output stage for all the bus lines,

the evaluation stage has means for determining criteria of a data stream other than the presence or absence of data for a period of time and selecting one of the bus lines as the receiving line based on the criteria, and

the redundancy means which can be connected upstream having a transmitting end comprising a driver for each of said bus lines.

Applicant teaches the art in new independent claim 13 a method for operating a redundant serial bus wherein the redundant serial bus has n>1 parallel bus lines for redundant networking of bus subscribers each having a single bus communications interface and the redundant serial bus comprises:

a redundancy means, which can be connected upstream, having n interfaces for connection to said n parallel bus lines and one

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interface for connection to the single bus communications interface of at least one bus subscriber,

said redundancy means which can be connected upstream having a receiving end comprising an input stage at least for each of said bus lines, an evaluation stage and an output stage for all the bus lines,

the evaluation stage has means for determining criteria of a data stream other than the presence or absence of data for a period of time and for selecting one of the bus lines as the receiving line based on the criteria, and

the redundancy means which can be connected upstream having a transmitting end comprising a driver for each of said bus lines;

the method comprises:

sending, during operation, identical message packets in parallel and at the same time to all of said bus lines,

receiving the identical message packets on all of said bus lines in parallel by the redundancy means which can be connected upstream,

checking the determined criteria of the data streams of the received message packets; and

selecting depending on the determined criteria of the data streams, one of the bus lines, whose data stream is passed on to the connected bus subscriber.

In each of independent claims 12 and 13 the evaluation stage determines criteria of the data stream other than the presence or absence of data for a period of time and selects, based on the criteria, the one of the bus lines.

As is taught by applicant in the application as filed in the paragraph that begins at line 20 on page 6, the evaluation stage 312 selects the receiving line 11 or 12 on the basis of criteria which are determined from the serial or parallel data stream, the time response and the state of the receiving line. "The criteria from the data stream include the frame error, parity error, preambles, synchronization sequences, etc."

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Thus, new claims 12 and 13 do not introduce new matter.

The Rejections of the Claims

The Examiner has rejected claims 1-2, 5-6 and 10, claim 1 is the only independent claim, under 35 U.S.C. 103(a) as unpatentable over U.S. Patent No. 4,630,266 (Sexton). The Examiner says that Sexton teaches all of the elements called for in claim 1 except for the single bus communications interface but does with reference to box 48 of Fig. 2 teach that one output is selected and thus concludes that it would have been obvious to one of ordinary skill in the art to input the two outputs of box 48 into an OR gate.

The Examiner says that claims·3-4, 7-9 and 11 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claim.
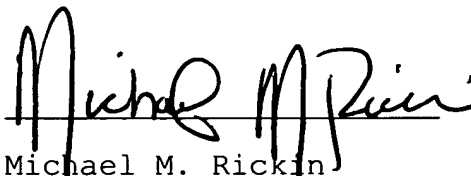
Sexton teaches the art that the bus to be used is selected from those that have data during a first period of time by an algorithm that does not switch buses unless the previously connected bus does not contain data. (See the Abstract and column 2, lines 9-13). Sexton shows in Figs. 2 and 5 block diagrams for two embodiments of his invention. Both embodiments use only the presence or absence of data for a period of time to determine to select either bus A or bus B. Therefore there is not any teaching or suggestion in Sexton to determine criteria of a data stream other than the presence or absence of data for a period of time and use that criteria as the basis for selecting one of the bus lines as the receiving line as it taught and claimed by applicant in new independent claims 12 and 13. Thus applicant hereby requests reconsideration of the rejection of the claims as obvious based on Sexton.

Reconsideration of the application in accordance with Rules 111 and 112 is requested.

Signature and Certificate of Mailing Appear On The Following Page

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Respectfully submitted,

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Respectfully, Debra A. Rietze

Date: June 26, 2003